

M.Sc. Examination, 2017
Semester – IV
Zoology
Paper – MZOT-402
(Fisheries & Aquaculture)

Time: 4 Hours

Full Marks: 80

Questions are of value as indicated in the margin.

Answer *any eight* questions taking at least four from each group.

GROUP- A

1. What is EEZ? Briefly describe the present status and potentialities of marine fisheries in EEZ of India. Discuss the management strategies adopted to improve the marine fisheries in India. 1+4+5 = 10
2. Classify the fishing gears according to their mode of operation. Briefly describe different types of fishing nets used in inland and marine fishery. 2+8 = 10
3. What do you understand by integrated fish farming. Describe the method of duck-cum-fish culture. Mention the advantages and disadvantages of integrated fish farming. 2+5+3 = 10
4. Give a schematic representation of the endocrine cascade related to gonadal maturation of fish. What are the utilities for manipulation of this cascade? Give an account of different natural hormones and synthetic analogues used for induced spawning of fish with a mention at which level of the cascade they work. Describe hypophysation in brief. 2+2+3+3 = 10
5. What is extensive type of fish culture? Why composite fish culture is considered as a modified version of extensive type of culture? Write down the advantages and disadvantages of composite fish culture. Add a note on nursery pond management for composite fish culture. 1+3+3+3 = 10
6. Write notes on *any two*: 5x2 = 10
 - a) Intensive fish farming
 - b) Chinese eco Hatchery
 - c) Hybrid fish
 - d) Air-breathing fish culture

GROUP- B

7. What is pearl sac theory? How is pearl forming matter synthesized and transform into pearl? Delineate the method of pearl nucleus insertion and graft tissue implantation in oyster mussel. 1+2+7 = 10
8. What are the rationales for raising monosex fish stock? Describe the method for production of all female fish stock. How triploidy in fish could be developed? 2+5+3=10

P.T.O.

(2)

9. How an infection is manifested as a disease in fish? Write down the causative agent and symptoms of dropsy and tail and fin rot diseases of fish. What measures should you take to control these diseases? Add a note on black spot disease of fish.

2+3+2+3 = 10

10. Mention the criteria to be considered for selection of a suitable site for brackish water prawn farming. Give a brief account of the pre-stocking and post-stocking management in a semi intensive *Penaeus monodon* farming.

2+8 = 10

11. What is aquatic weed? Mention different types of aquatic weed with examples. Write the disadvantages of aquatic weeds in fish pond. Write different weed eradication method stating their merits and demerits.

1+2+2+5 = 10

12. Write notes on **any two**:

5x2 = 10

- a) Curing and drying method of preservation of fish
 - b) Battered and breaded product of fish
 - c) Radiation preservation of fish
 - d) Fishery byproducts
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